



1916



**U. S. SECURITIES
GOVERNMENT FINANCE
ECONOMIC
AND FINANCIAL
CONDITIONS**

NEW YORK, JULY, 1916.

General Business Conditions.

THE past month has witnessed the inauguration of a presidential campaign, and also a crisis with Mexico which has seemed to bring the country to the brink of war, but business circles have been but slightly influenced by either development. The political issues are not related to industrial or social unrest to the extent they were four years ago, and a war with Mexico, deplorable though it would be, has no very alarming aspects for the United States.

The general business situation has undergone little change. The crop outlook is better than it was a month ago, and promises at least an average yield. There has been some recession of prices, for metals, natural products and manufactures, but they are due to increasing production rather than to diminishing demand, and they have not gone far enough to disturb confidence or materially check the activity of buyers. Production and distribution continue upon an unprecedented scale and, as a rule, with large returns to producers. Manufacturing lines are generally sold ahead for the remainder of this year, and are well assured as to next year's prospects.

Foreign trade is as prosperous as it can well be, considering how little capacity our manufacturers can spare from the home demands. Exports for the month of May aggregated \$472,000,000, the greatest for any month of our history, with a favorable trade balance of \$243,000,000. For the fiscal year ending June 30 there will be a favorable trade balance of approximately \$2,200,000,000, or about double that of the fiscal year 1915.

Under these conditions, the problem of making settlement for the accruing balances is an even larger one than that of last year. The British government announces very satisfactory progress with its policy of mobilizing American securities from British holders. Since the announcement of the purpose to impose an extra tax of 10 per cent. upon income from all securities that the government stood ready to buy, the facilities for receiving such securities have been taxed to the utmost. There is no doubt that ample supplies will be available to take care of purchases in the United States for a long time to come, but of course they must be offered gradually in this country to avoid affecting the market unfavorably. Meanwhile the British

government has resumed shipments of gold from Ottawa and London on a large scale. The amounts received on this movement aggregate at this writing \$110,000,000. This gold serves the double purpose of paying for supplies and strengthening American reserves, the latter result contributing to favorable action here upon the various loan operations which the allies have pending.

These gold receipts have had the effect of relaxing the money market, which was feeling the influence of a moderate but continued drain to the Treasury and the interior banks. The surplus reserves of the New York Clearing House banks are again well above \$100,000,000, and as payments upon the income tax are now practically over, and government disbursements are increasing, the Treasury absorptions will cease. Treasury officials estimate total collections for the fiscal year on account of the income tax at \$125,000,000, and believe that the year will show a surplus of revenue.

The loans of New York Clearing House Banks are now lower than at any time since February 5th, last.

The Labor Situation.

The pressure for labor is undiminished, but the situation is less disturbed than it was two months, or even a month, ago. Most of the May wage controversies have been settled, the chief exceptions being in the garment trades of New York and between the railway trainmen and the employing companies. The latter is much the most serious of the unfavorable factors of the business situation. The consequences of a tie-up of the railways would be so disastrous that the public scarcely credits the possibility, but the controversy is drifting directly toward a rupture. No approach to agreement was made in the conferences that were held. The employees claimed to be wanting an eight hour day, but the officials representing the companies dismissed the idea of making the present runs in eight hours as impracticable, and affirmed that the real purpose was to increase wages. They proposed that the entire controversy be submitted to the Inter-State Commission for adjudication but offered to agree to arbitration under the Erdman act.

This offer makes a strong appeal to the public. The members of the Inter-State Commission are the best informed men upon the railway situation in the country. They know whether or not it is practicable to reduce the train runs to eight hours

Those desiring this circular sent to them regularly will receive it without charge upon application.

without reorganizing the whole service and greatly increasing the costs of operation. They know how the wages of the trainmen compare with the wages of other railway employes, and with wages in other occupations. They know all about the ability of the companies to pay higher wages and, whether or not it can be done without increasing rates. They can consider the entire subject of railway income and disbursements together, and if they conclude that wages should be higher, they would have, what nobody else would have, the power to adjust rates to meet the new requirements. It cannot be said that the Commission is either without adequate information or the judicial qualifications to deal with the case. The more the proposal is considered the more clearly it will appear to be the best possible disposition of the matter.

It is not reasonable on the part of the trainmen to demand that their claims for more pay shall be allowed under duress, because they have power to tie up the transportation systems. The day has gone by for either the managers or employes to attempt to settle such an issue by force, without regard for the vast public interests involved. The owners must take the rates that are determined for them by public authority. Nobody suggests that the railway men should be absolutely compelled to work for wages fixed by arbitration; they will always have the privilege of quitting the railway service as individuals, for other occupations; but the right to combine for purposes that affect the public interests is different from the right to quit work as an individual. The right to combine and to use the power of combinations is always subject to public authority. When it comes to organizing to accomplish a purpose by force, with vast injury to innocent parties, the community has a right to exercise judgment. Nobody should ask the entire community to submit to inconvenience and loss for his advantage without assurance that his claims are just; he is under a moral obligation to furnish proof. No doubt, a vast number of the wage-earners of the United States, who will have to contribute to any increase of railway wages and railway rates, would be glad to exchange their own jobs for places in the railway service under present conditions. The whole subject should be dealt with as one in which many interests are involved and entitled to consideration. No single interest can assume the right by reason of its position to force a settlement advantageous to itself and unjust to the others.

The officials of the railway orders have gone back to their membership to ask for authority to call a strike. It is customary to give full powers to the leaders, as a means of strengthening their hands in negotiations with the companies. There has been justification for doing this when the officials of railway companies were taking an arbitrary stand and insisting upon their right to be the sole judges of the case, but in this instance the companies have offered to leave the entire case to competent and impartial adjudication. This is a proposal which is not only fair for this case but will establish a desirable precedent for the future. Its acceptance will go far to establish permanent peace between capital and labor

in the transportation industry, and will have a beneficial influence in other fields. The United States stands for arbitration instead of war as the means of settling disputes between nations, and the principle is equally sound in great semi-public industries. With this proposal before them the employes have no occasion to use further threats; as good citizens they should be glad of the opportunity to co-operate in establishing the principle of judicial settlement. No one should ever fight for more than what is fair, or insist that he alone should be the judge of what is fair between himself and others.

Railway Situation in United States as Viewed by a Foreign Authority.

Mr. W. M. Acworth, a distinguished British writer upon railway economics, has just concluded a visit to the United States, during which he went over several of the important systems, for the purpose of bringing his acquaintance with the railway situation in this country down to date. Mr. Acworth is not a professional railway man, or in the employ of any railway company, but a student and author who has made himself an authority upon the science and practical economics of transportation. He began life as a teacher, and in the youth of William, the present German Emperor, served as his tutor.

Mr. Acworth has been a frequent visitor to the United States, and a careful, disinterested student of our railway problems. Knowing his competency to discuss them, the National City Bank of New York, before his departure a few days ago, solicited a statement of his views upon the railway situation in the United States, which, for many reasons, we believe to be one of the most important subjects now before the people of this country. He courteously complied, and we are giving the statement in his own language below:

Statement of W. M. Acworth.

"This is my tenth visit to the United States, of whose railway affairs I have been for about thirty years a diligent student. Every time I am brought into contact with American railways the overpowering impression produced on my mind is of the marvelous results which the efficiency of the railroad men produces with the minimum expenditure both of capital and income. It is not very far from accurate to say that the average mile of English railroad has cost as many pounds as the American mile has cost dollars. It is true that for our expenditure we have mostly double-track roads while your typical road is only single-tracked, but per mile of line you probably carry—we have no ton-mile and passenger-mile statistics in England—more tons of freight and nearly as many passengers as we do, and thanks to your concentration of load into wholesale units both of carload and trainload, your single track is normally capable of taking care of the traffic offered."

THE PROBLEM OF TERMINALS.

"But I do not think it is so with your terminals. Fifteen tons of package freight in one thirty-ton car take much less room on the road than the same weight distributed over five of our little ten-ton cars, or "trucks" as we call them, but when fifteen tons come to be handled at the terminals and carted away by teams, they need just as much space in America as in England. In other words, you will have to spend vast sums of money to enlarge and improve your terminal accommodations, and the land required for the purpose you will have to buy and adapt at modern prices. One does not need to go outside of New York with the new Pennsylvania and Grand Central stations to see what new terminals cost in a great city."

DOUBLE TRACKS AND OTHER IMPROVEMENTS.

"But there is more than this. Even assuming that you can carry your present traffic along the road, statistics show that your traffic doubles every twelve years and, therefore, before long you will have to do a great deal of double tracking, and double-tracking very often means practically rebuilding the railroad. Again, as the country gets more settled, traffic becomes more diversified; express and fast freight become more important. There will be more passenger trains, both through and local not only due to closer settlement, but also to more exacting demands in matter of service. Now, express and fast freight trains not only carry less, but run at higher speeds than slow freight, and passenger expresses run at higher speeds still, so you will have both more trains on the line for the same amount of traffic and greater varieties in speed, and all this means, as every railway man knows, a great reduction in the carrying capacity of the line as measured in tonnage."

"Public demands for abolition of grade crossings, for steel coaches with their enormous weight per passenger carried—three times that usual in England—for block signalling, for monumental stations, etc., etc.—all these things will imply immensity of expenditure. Mr. Hill estimated ten years ago that the railroads ought to spend a billion dollars a year to keep abreast of the public requirements. They have not spent it, not because the expenditure was unnecessary, but because the money was not forthcoming, and somehow you will have to catch up the arrears and take care of the future on an even more generous scale, or the development of the country will be brought to a standstill."

NEW CAPITAL REQUIREMENTS.

"Can the railroads get all the money they need? The question is a very serious one, and I will not attempt to answer it. That in the past they have not been able to get out all the long-term bonds they would have liked to sell is sufficiently proven by the volume of short-term notes issued and frequently renewed at

maturity. Why should an investor buy railroad bonds? Primarily, he wants security. The fact that over forty thousand miles of railroad are today in the hands of a receiver is sufficient proof that he does not always get it, and if railroads cannot sell bonds, still less can they issue common stock. Even the Pennsylvania Railroad, after seventy years of honest and intelligent work in developing the resources of what is perhaps the richest traffic territory in the world, earned in 1914 hardly more net income than sufficed to pay its modest six per cent. dividend."

"Why should the public invest in railroads, if the returns are less than on other investments and the security of the capital seems to lessen rather than increase? And if the American public refuses to invest, there is certainly no other source for new capital nowadays. The European market will have enough to do to take care of its own requirements for many a year to come."

"For all that, the result of my visit the prospects for the future look to me far more bright than I could have imagined when I was last here, less than three years ago. I see from the replies to a circular sent out to its clients by a New York banking house that 1310 correspondents report that hostility to the railroads is abating, while only 185 say that it still persists; and the same correspondents, by a majority of almost two to one, report that a five per cent. advance in rates would not be seriously opposed. And a general five per cent. increase, all of it net income be it observed, would put a very different aspect on the whole situation."

HOPEFUL SIGNS.

"But the railroads need not merely cessation of hostilities, but active support and help from the public authorities. They cannot complain that in the past the legislatures have neglected them. On the contrary, the excess in quantity of railway legislation has been almost as conspicuous as the deficiency in its quality. But there are many signs that things are changing. Recent decisions of the Interstate Commerce Commission have shown that this most important body appreciates the situation, and is ready to help the railroads to reach a sounder financial position. The fact that one of your great political parties has put forward in its platform the unification of control under the single authority of the Federal Government is a most hopeful sign. The mere avoidance of waste owing to the necessity of complying with innumerable varying requirements as to methods of operation will be a great thing."

COST OF MULTIPLIED AUTHORITIES.

"I question whether the public has any conception of the amount of time and money wasted owing to the multiplication of inquiries, rate schedules, accounts, reports, etc. I have seen an estimate that the railroads, taken all to-

gether, have to furnish about two million reports per annum to the various state and Federal authorities. Unification of control will put an end to such patent absurdities as the fact that, while the Interstate Commerce Commission recognizes that $2\frac{1}{2}$ c per mile is a reasonable fare, say, from Rochester to Cleveland, if a passenger on the same train gets out at Buffalo, the New York commission decides that he cannot reasonably be asked to pay more than 2c per mile!"

"Then your Federal Valuation Law of 1913 must soon begin to bear fruit. From what I have seen and heard of what has already been done, I am persuaded that any fair valuation, such as is now being carried out by engineers appointed by the government, will prove conclusively what I have always myself firmly believed, that the railroads of the United States are worth today far more than the sum at which they are capitalized."

"I am quite sure that the American public mean to be fair, but they can hardly be expected to keep abreast of the railway situation, as it changes from year to year. They have been thinking too much hitherto of "old forgotten far-off things and battles long ago." They seem now, as proved by the proposal that a Congressional committee shall inquire into the whole situation, to be inclined to have done with the past and to turn their minds to the future. An exhaustive inquiry into the situation as it exists today can only be in the interest of the railroads and railroad investors. It will show, I am firmly convinced, that the railroads deserve well of the country, that per dollar of capital invested they do more work than any railroads in the world, that the rates they charge, having regard to the service rendered, are far lower than anywhere else in the world, but that the rates, as a whole, are not adequate to afford a steady and reasonable return year in and year out on the present investment, and to induce capitalists to make the great further investment which the public interest requires."

"Once the knowledge of these basic facts, as I believe them to be, has been got into the public mind, I have no doubt that the railroads will be given such fair treatment as will produce the investment of all the capital required. It is to be hoped, however, that the public education will be speedily completed. For the expenditure of new capital on a generous scale must not be much longer postponed if the trade of the country is to continue to expand in the years ahead."

THE WAGE QUESTION.

"The demand for higher wages which your railroad employes are making and the possibility that the controversy may result in a strike that will tie up the transportation lines, recalls the similar struggle which we had in England five years ago. Possibly our experience will be instructive to the American people in view of the present situation.

It is to be hoped that the dispute here will not go to the length of a strike. That should be avoided if possible."

"In our case, in 1911, we actually experienced a serious suspension of traffic. The strike itself lasted a little less than a week, and while it was on, traffic was not entirely suspended, but during that brief period it inflicted a tremendous loss, not only upon the workers themselves and upon their employers, but chiefly upon the industry of the country as a whole."

"The wages of employes at that time were very much lower than they have been in this country, and there was a general feeling that they were too low. The average wages of British engine drivers were certainly not more than \$10.50 a week. Conductors received not above \$9.00, while firemen and brakemen were paid \$7.00 a week or less. The average pay of all railway workers was not more than \$6.00 a week."

"In order to aid in a settlement of the strike, the Government entered upon a promise that an increase of freight rates would be allowed to the companies, and the agreement was embodied in the following words:"

"The Government will propose to Parliament next session legislation providing that an increase in the cost of labour due to the improvement of conditions for the staff would be a valid justification for a reasonable general increase of charges within the legal maxima if challenged under the Act of 1894."

"The Government carried out this agreement and Parliament passed an act in pursuance of the promise, with the result that freight rates were advanced about 4 per cent. upon the bulk of the traffic."

James J. Hill.

The death of Mr. Hill has been the occasion of much appreciative comment upon the great and useful part which he performed in the development of our Northwest. The press of England has given almost as much attention to the event as the press of this country, for he was an international figure. He brought large sums of capital from Great Britain and used them in providing transportation facilities for that great stretch of then wild territory between Lake Superior and the Pacific Coast, with the result that population flowed in, farms were opened, cities were built, and a vast amount of new wealth was created. Out of this new wealth, Mr. Hill and his associates were well rewarded, but their share was an insignificant part of the benefits distributed. In addition to the benefits conferred upon the people who have found homes, employment and fortunes in that territory, are the benefits conferred upon the outside world, by the new supplies of food and materials that now come from that territory. And finally, the fortunes which Mr. Hill and his associates created for themselves, where there was nothing before they came, exist for the most part in the form of property that is valuable to them only as it is used for public purposes, and in the case of Mr. Hill, the income was for the most part reinvested for the further development of the territory.

The ambition, the energy, the purposes of his life, were centered in the development and enrichment of that territory.

He was a man of large ideas, with the imagination to plan on a great scale for the future, but the most remarkable characteristic was his ability to see every necessary step in the development of his plan. He not only saw the possibilities, but how to realize them. He was a leader of men and of communities. He was an organizer; he made the labors of millions of men more effective than they would have been without the ideas and the facilities that he supplied.

He was primarily a railway builder and operator and among the leaders in the development of railway efficiency, but his active mind grappled with all the problems of the time. He clearly comprehended that mutuality of interests which is the most important fact in all our social relations. He saw that the interests of his railway company were closely identified with the interests of the communities which it served, and that their prosperity was vital to it. The chief interest in that territory was agriculture, and there is nothing in Mr. Hill's career more creditable to his sagacity or, we take it, more characteristic of the man, than the practical interest which he manifested in the betterment of farming methods. His achievements as a railway man, as a financier, and in a general way as a leader and promoter of industrial development, have been described and eulogized at length, but the details of his intelligent efforts for the improvement of agriculture are not so well known. The truth is that for more than thirty years this was one of the chief objects of his attention.

Promoting the Live Stock Industry.

In 1883 an unusually dry spring and summer gave the farmers of the Northwest about one-half to two-thirds of a crop. "I started in then," said Mr. Hill in a recent speech, "to scatter cattle. I brought out within three years, from the best herds I could find in Great Britain about 800 thoroughbred bulls and gave them to the farmers." The only condition attaching to the gift was that the bulls should be properly treated for a certain period. The animals were distributed with care, one or two in each county, and service was to be given for a nominal charge. In this way Mr. Hill hoped to diversify the resources of the Northwest, to protect the farmer from possible crop failures and to sow a future traffic which the Great Northern would some day surely reap.

At another time (in 1907), Mr. Hill stated that he had distributed somewhere between 6,000 and 7,000 thoroughbred cattle and hogs throughout the Northwest. Probably the total for the entire period would be over 10,000. During all this time he carried out an active campaign—often taking his message direct to the farmers' gatherings at county fairs. He gathered statistics, employed experts, experimented on his own farm, and kept the subject alive by timely lessons. For instance, when wheat was selling around fifty-five cents per bushel, he experimented feeding it to his steers—and got eigh-

ty-two cents a bushel for the wheat "on the hoof."

Then again, he pointed out that if forty or fifty bushels of corn per acre are raised and shipped to market, the weight is over 1,700 pounds, whereas, if a farmer has a good steer to build on, it will give him from 350 to 400 pounds additional weight to the steer. He will then send that corn to market under entirely different conditions. And further, he keeps on the farm as fertilizer, one-third of the value of all that he feeds the steer.

One of the experts selected by Mr. Hill to carry on his work was Prof. Thomas Shaw, one of the leading authorities on animal husbandry in the world. Prof. Shaw has spent his entire time in recent years going over sections in the Northwest which have not shown up to the best advantage. His method is to make careful analyses of the soil, and a study of the general conditions in a particular section. After convincing himself of the proper methods to be pursued he has advised the farmers of his results and discussed their problems with them. In 1914 Prof. Shaw purchased in England over 100 heads of dual-purpose short horn bulls, which were in turn given to a selected list of farmers by Mr. Hill. These bulls were selected because they have proven the best for the average farmers inasmuch as they produce herds which give large returns from milk as well as beef.

Demonstration Tracts.

Mr. Hill urged with equal enthusiasm and earnestness, soil analysis, crop rotation, seed testing and proper cultivation of the soil. For years he urged the operation by State or Nation of model farms. In the spring of 1912, a tract of five acres was selected (along the line of the Great Northern) on each of 152 farms in Minnesota and North Dakota. Mr. F. R. Crane, after nine years at the head of the Agricultural Engineering Department of the University of Illinois, and three years as Superintendent of the Special Agricultural School at Menominee, Wisconsin, was put in charge. The owner of the land in each case agreed to plow, plant and cultivate the five acres exactly as directed. Selected seed was supplied to him. He received the product of these acres as his own and in addition was paid for his labor. Here is the record for the first season's administration:

GREAT NORTHERN PLOTS.		
	Minnesota	Average for State
Wheat	29.86	15.8
Barley	44.65	28.2
Oats	67.09	41.7
North Dakota		
Wheat	31.47	18.
Barley	49.71	29.7
Oats	78.64	41.6

Quality gained as well as quantity. The grain raised by the improved method is larger, plumper and heavier.

Encouraged by these striking results the plan was carried on in subsequent years. In the fall of 1912 arrangements were made with 361 new farmers. Soil samples were taken from each farm and shipped to St. Paul to be analyzed in the Great

Northern soil laboratory at Mr. Hill's farm. Careful analysis showed in a majority of cases a considerable lack of nitrogen and phosphorus and these two elements were applied to the plots where needed under the supervision of the expert, Mr. Crane. Barnyard manure was recommended as the best and most economical way to build up nitrogen in the soil. To supply the phosphorus it was found that about 400 pounds of acid phosphates per acre when applied to soil low in this element proved very profitable.

It was a simple computation to prove to the farmer, in view of the increased yields of grain, and the fact that application of fertilizer was necessary only once in every two to three years, that it was decidedly profitable to apply such essential elements as were deficient in his soil. For instance, where manure and phosphorus were used on barley plots a gain of eight bushels was made compared with the use of manure alone. At an average price of 50c. per bushel a gain of \$4.00 an acre resulted. The cost of 400 pounds of acid phosphate would not exceed \$1.00 to \$1.35. A net gain of from \$2.65 to \$3.00 per acre is evident—almost enough to pay the rent!

This happy combination of scientific analysis and actual demonstrations of the striking results under the guidance of experts, provided each community with an inspiration for better farming methods. The results were believable by the farmer because he could watch the progress made, and the lessons were therefore readily grasped.

Propaganda Through Banks.

In 1912 Mr. Hill acquired control of the First National Bank of St. Paul and the Northwestern Trust Company, and through these institutions proceeded to organize another campaign, inviting the co-operation of country bankers. Prof. H. R. Smith, professor of animal husbandry in the University of Minnesota, was employed as live stock expert.

Prof. Smith's work is primarily in conjunction with the country banker in enabling him to help the farmer. He makes from ten to fifteen speeches per month at farmers' meetings arranged by local bankers throughout the Northwest. Oftentimes as high as 150 to 200 farmers are gathered at such meetings.

Prof. Smith's advice is at the service of local bankers and others who wish to procure blooded stock for their localities. In many instances money is advanced by local bankers to aid farmers in such purchases.

The most elaborate campaign thus far carried on by the bank and trust company is an annual corn show, the first of which was held last year. Under the slogan "Corn and cattle contribute capital for bigger bank balances," the interest of the banker was aroused in encouraging an increased production of corn in this section, which has heretofore been chiefly devoted to one crop, wheat. The Northwest was divided into 34 sections and first, second and third prizes were awarded for the best corn grown in each section. In each division a

boy's contest was arranged and separate prizes given.

These broadly conceived plans for the betterment of farming conditions which Mr. Hill lived to see bear fruit largely through his own efforts, have laid a strong foundation for the future of the Great Northern Railway and the whole Northwest. There is no greater contrast in any industry than that which the present-day demonstration farm in every neighborhood, laboratories of agricultural chemistry and agronomics, and scientific farming methods, bear to the agricultural conditions as Mr. Hill first found them. From this change already radiates an influence that promises to recreate an industry and wonderfully enrich a nation.

Bankers of Many States Promoting Agriculture.

Although Mr. Hill was a pioneer in this field the activities of Minnesota bankers along this line date back of his entry into banking. The Northwestern and the First and Security National banks of Minneapolis have been energetic in the same cause, and the Minnesota Bankers' Association began some years ago to appoint committees and labor systematically for the promotion of agriculture. If we mistake not it was the pioneer among bankers associations in this work, but since then the idea has spread until throughout the West the improvement of agriculture has become the chief theme at bankers' conventions. In Iowa a year ago the state association held its annual meeting at the State College of Agriculture. The Illinois, Michigan, Texas and Alabama associations have been especially active in practical work. The Alabama Association has been conducting for more than a year a thorough campaign throughout the state for the diversification of agriculture and for the extermination of the cattle tick which has prevented the profitable development of the dairy and beef industry. The American Bankers' Association maintains an active commission upon agriculture, which publishes an excellent monthly journal, the *Banker-Farmer*, of wide circulation.

This broad movement to improve the conditions and methods of agriculture is certain to bring good results. The most notable feature in these campaigns is the interest taken in them by the boys and girls upon the farms. They are quick to seize upon the inducements offered for unusual yields, and to adopt new methods, and through them there is promise that the standard of efficiency upon the farms will be steadily raised.

Perhaps the most important gain, however, is in the growing recognition of a genuine community of interests, for as this is more clearly realized, the efforts of those who have the means and ability to improve all social conditions will be stimulated until every ill-kept acre and untrained individual will be seen to be a loss and a reproach to the community.

Wages and Efficiency After the War.

There have been and are two views about labor conditions in Great Britain and the other warring countries when peace is restored. The one that has been most commonly held is that the industries will

be seriously disorganized by the loss of skilled and experienced men, and that on this account and as a result of the taxation which must be imposed, labor costs will be inevitably higher. It cannot be doubted that these influences will be in effect, but it has become apparent that the war has other and counteracting results, and the real question is as to which set of influences will preponderate. In the first place women have been installed upon many kinds of work which they had not attempted before, and they have given such a good account of themselves that they are likely to remain in some of these new employments. It is generally accepted in all advanced countries that with the progress of society, women will be relieved of hard physical labor, and that save for a few years before marriage, and in the exceptional cases, they will not be a factor in the competitive labor market, but the war will seriously increase the number of women who must find their own livelihood, and it is evident that any considerable increase in cost of living will bring large numbers of women into industry.

But another influence, perhaps more permanent than the presence of women in industry, is that created by modernization of industry under the war pressure for increased output. In all of the old countries, where labor has been cheaper than in the United States, the necessity for labor-saving methods has been less urgent than here, and traditional methods have prevailed to a great extent. The labor organizations, through mistaken policy, have stood for the old methods, and nothing short of the exigency created by the war could have suddenly lifted the industries out of the ruts in which they were held. Under no other circumstances could a nation-wide demonstration of non-efficient methods have been obtained. The result has been a surprising revelation of the hitherto unused productive capacity of the country. In view of the fact that approximately 5,000,000 men of the most capable industrial class have been withdrawn from the working forces for service in the army and navy, that a vast section of the industries is occupied in producing war supplies, and that an effective embargo exists upon some of the most important British exports, it is astonishing that that country's exports hold up so near to the figures of before the war. In the month of May, 1916, the exports of the United Kingdom were forty per cent. greater than in the month of May, 1915, and actually \$25,000,000 greater than in May, 1914, before the war. These figures are inflated by high prices, but the showing is nevertheless remarkable, and if this can be done in the midst of war what reason is there for expecting a falling off of British exports when peace is restored?

We have at hand the abstract of a statement made by the manager of an important industrial works in England, to the stockholders of the company at the annual meeting recently, in which he says:

"Wages and the cost of raw materials have risen to, in some cases, double what they were in pre-War times, but in many directions the removal of the restrictions on output, and the work of a simple and easily learned character done by unskilled labour, has resulted in consider-

able reductions in final cost, proving definitely that if the workers would only throw off the yoke of the section of their unions who preach 'restriction of output as the only means of regulating work and preventing non-employment' they would be able to earn greatly increased wages and insure employment for everyone by making it possible for a large portion of the goods that are now, or were previous to the War, purchased abroad to be made in this country. This is a much more important matter than a fiscal policy, and more hopeful if it could be brought about than a combined effort to restrict German and Austrian competition, because it would be economically sound and of a lasting character. It seems to me that the present would be a fitting opportunity for the employers' federations and the workmen's unions to get together and discuss the encouragement of the better instincts among workers generally, and the conditions under which it would be practicable, after we have beaten the enemy in a military and naval sense, to pull together and beat them in manufacturing and commerce. A return to the old narrow-minded ways, small and uniform wages, restricted and misdirected efforts, seems impossible. Both sides would have to make changes, but the possibilities will be so enormous for each party that any throwing overboard of ancient and out-of-date rules, would be more than amply repaid. The cost of the War is enormous, and we have not yet finished with it, but if we can commence operations in a well-organized way immediately the struggle is finished the losses will be wiped out in a very short time."

Finally, besides the changes in methods, and the more general introduction of labor-saving machinery, which may be expected to occur, it is probable that important changes will have taken place in the workers themselves, particularly in the men who have served in the armies. Some people predict that many of them will never go back to the old work, but will emigrate to the colonies, where the opportunities are greater, which, if true, will create still another factor in the situation. Perhaps nothing better could happen to the world than a "back to the soil" movement which would cheapen the necessities, but it would intensify the labor shortage in England. On the continent there may be governmental interference with emigration. But in any event it is a common opinion among observers that the men who have been in the campaigns will have received a great stimulus from the experience, and that they will not be content to work again under the old limitations or fall back into the old, contracted views.

Scientific Education Wanted.

The more closely the industrial situation is examined, at home and abroad, the more convincing is the evidence that progress in industrial methods is bound to be more rapid in the future than in the past, and that a country's position in trade will depend upon the degree of harmony in which capital and labor work together, the receptivity of the population to new ideas, and the fertility, resourcefulness and enterprise displayed by both employers and wage-earners.

The most remarkable industrial development upon record has been that of Germany since 1871, in many respects surpassing even that of the United States, although this country is greatly superior to Germany in variety and extent of natural resources. The progress of Germany has been won by developing the mental resources of her people rather than by developing the physical resources of the country.

The German people have been made efficient by a thorough system of education and discipline. The wonderful growth of their industries, the vast expansion of their foreign trade, the proud position they had achieved before the war as a carrier upon the seas, were the rewards of high intelligence and scientific industry. These achievements did not come by working longer hours or more painfully than they had labored before. They were the result of organization, leadership and a system of practical education for the masses of the people which made them individually more capable and productive than their fathers had been.

The careful students of affairs in England understand very well the secret of Germany's progress, and they do not qualify their language in telling their own people what must be the conditions of world competition. A recent number of the *London Statist* contains a powerful editorial, prompted by the call for an Economic Council of the Allies to consider policies after the war, in the course of which it says:

"The real truth, as we of this Journal see it, is that the domination of international trade by Germany can be ended only by other countries becoming at least as well educated in science as Germany is. Take the case of the United Kingdom. She became the leading seafaring, manufacturing, banking, and commercial country in the world nearly a century before Germany. And yet in about another half a century Germany has obtained control of some of the most important branches of British trade. Not only that, but she has obtained control of important portions of all the trade of the British Empire and of most Continental countries as well. How did she do so? Partly, no doubt, the Government was behind all the traders, whether bankers, manufacturers, or merchants. It was their commercial traveller and their backer. But, mainly, Germany has attained to her pre-eminence in trade because she was scientifically the best educated country in the world. It would be wearisome to catalogue all the branches of science in which the Germans are superior. It is more to the point to turn to ourselves. We had an immense advantage in practically a century's start of Germany, and we are now crying out that in another half-century Germany has beaten us. The question is, Why and how? And the answer to that is simply dislike of science, disbelief in real education and, lastly, mental indolence. We have kept up at the older universities a system of education which was established in the Middle Ages. And we flattered ourselves that the kind of teaching which suited the Schoolmen is also adapted to make Britishers supreme in the economic world of today. As long as we indulge in that folly, so long Germany will beat us, let us resort to what alliances and what treaty engagements we may please."

It is apparent that British industry is having a thorough shake up, and the outcome of every such disturbance of old and stereotyped conditions is reorganization upon improved lines. Well informed men prophesy that although wages there will be permanently higher, production costs after the war will be lower than before.

Industry in America.

If it is a fact that this reorganization of industry abroad will offset the losses of men and rise of wages, what will be the competitive position of industry in the United States? Will it likewise have made a gain in efficiency sufficient to offset the rise of wages that has taken place here, and to reduce the cost of production? It sounds paradoxical to

say that Europe will be a more capable competitor after suffering the losses of this war than it was before, but it would not be the first time that adversity and hardship has proven to be a better training school than prosperity. That is, in fact, the common experience.

People are never in greater danger from competition than when they think their position is secure, and it behooves the leaders of industry in this country, among both employers and wage-earners, to understand the conditions that are likely to confront them. They should set themselves harmoniously to the task of reducing costs, not merely down to what they were before the war, but lower. The profits of this period of prosperity will not stay with us long unless they are used for this purpose, and the high wages of this period will not be permanent if they result in permanently higher costs. These admonitions should be blazoned in every office and workshop. We know that industry will not stand still, but it remains to be seen whether its progress will be more rapid here or in other countries. The essential thing is to imbue everybody with the spirit of progress, to inspire all with the consciousness that change—progress—in industry is normal and inevitable, and that all classes are interested in promoting it.

We have been accustomed to think of the steel industry as the most efficient of industries, but the by-product coke ovens are only now coming into general use. The wastes in the lumber industry and in coal production are notorious. Great economies have been accomplished in transportation, but others are possible. In every line of production gains are to be made by progressive management.

We must uproot in this country the idea that when higher labor efficiency is urged it means that the wage-earner must be driven to more wearing exertions. Intelligent employers know that the most efficient work is not done by men or women who are working beyond their strength; the work must be done with an elastic vigor which is daily replenished, and which is stimulated by good will and a genuine interest in what is being accomplished. There is ample evidence that here, as well as in England, there are latent resources in the workers, of which they are often unaware themselves, and which they would be the better for using. The truth is that nobody improves or develops in capacity unless he tries out his capacity and makes use of it at least a part of the time.

Mr. James Couzens, who for thirteen years was manager of the Ford Automobile Works, in a recent magazine article, advocates high wages as a means of securing more effective labor and of lowering labor costs. He says that the wage-earner "needs an incentive to freshen his interest and arouse his ambition," and asserts that high wages have been profitable to the Ford Company. It has been authoritatively stated elsewhere that every advance in wages in the Ford works has brought a gratifying increase in the output.

High wages in the Ford shops have been accompanied by an extensive system of paternal, or friendly, oversight upon the employees, their per-

sonal habits, thrift, and even their domestic relations and manner of living. The excess which the company pays above average wages is given as "profit-sharing," and efficiency and good citizenship are required in return. Drinking, gambling, unthrift, unsanitary living, quarreling, domestic discord, are considered harmful to efficiency, and employees who offend in these respects lose a part or all of their participation in profits, and if they are incorrigible must ultimately give up their places to others who are willing to co-operate with the policy. The share of profits withheld while the offender is under discipline are not saved to the company's treasury but turned into a charity fund. The scheme is parental and educational, and it is said that few fail to respond to it. If men do not develop efficiency in one class of work they are shifted repeatedly, but it is not considered a kindness to a man to allow him to remain inefficient. One of the objects held up by the management is to develop the capabilities of men for their own good as well as to increase their value as employees, and the employees seem to accept the regulations as of this intent.

It does not follow that the Ford plan is applicable to all industries and all cases, but it is certainly a highly interesting experiment, and it has gone far enough, and is sufficiently supported by other experience, to show that there are great latent resources in the human factor of industry, and that greater efficiency does not necessarily entail greater fatigue or more oppressive working conditions. The best method of securing that greater efficiency is a matter over which there may be differences of opinion, but the importance and desirability of securing it cannot be sensibly disputed. If it could be magically obtained simultaneously in every industry the effect would appear in a greater abundance of all necessities and comforts for everybody, and this is the end for which higher wages are sought.

One feature of Mr. Couzens' article is his comment upon the complaint that by raising wages above the customary rates the Ford company is setting a pace which other manufacturers cannot follow, and disturbing the labor market. He says:

"As for the employer, it is up to him to meet competition in wages as in everything else, and if he cannot survive on that basis the sooner he goes out of business the better for himself, for his employees, for his community, and for his country.

"There is no law of God or man by which a merchant or manufacturer is guaranteed protection against his own incapacity. There is nothing sacrosanct about manufacturing or merchandising. There is not even any way of knowing beforehand whether a man is endowed with the talents necessary to engage in any business. If he has sufficient capital to start with, or an influential relative to put him in a commanding position, he is licensed to practise. Why his competitors should be asked to worry about his success is something I am quite unable to understand. He fails, as a matter of fact, more often than he succeeds, and if the world waited for the derelicts to raise the standard of wages it would be a long wait."

This is plain talk, but it seems to be unanswerable, subject to the condition that competition shall conform to sound and wholesome business principles. According to the argument there is nothing to condemn in the policy of paying higher wages than competitors or selling at lower prices than

competitors, even though this may eliminate the competitors, and, subject to the above qualifications, this is the pathway of industrial progress. The natural effect of the policy would be to bring the most capable managers and the most capable workers together and to give them leadership, but that policy has not been in favor in this country.

If it is sound policy for managers in the payment of wages, why is it not sound policy for the workers in the earning of wages, and why should there be insistence upon the same wage regardless of earning power?

The Tavenner Bill.

While the leaders of industry and students of economic conditions are striving to impress the country with the necessity for the development of efficiency, Congress has confirmed its previous action condemning modern methods for the promotion of efficiency in Government works.

The Sixty-third Congress voted an amendment upon the army and navy appropriation bills, forbidding any officer, superintendent or foreman having charge of the work of any employee of the United States Government to make with a stop-watch or other time-measuring device, a time study of any job, or of the movements of any employee, and also prohibits the payment of any premium or bonus for expediting work. This provision was aimed at the so-called Taylor efficiency system which had been installed in several of the arsenals.

The Tavenner bill extends this prohibition to all Government work, but since it was in an unfavorable place on the calendar its advocates have again resorted to amendments to the appropriation bills. On June 22nd its provisions were incorporated in the fortifications bill by a vote in the House of 197 to 115.

In the debate which preceded the vote Congressman Moore, of Philadelphia, presented a protest against the legislation from employees of the Frankford Arsenal, Philadelphia, and the House voted down an amendment providing that efficiency and stop-watch systems might be retained or rejected in any shop by a referendum to the employees.

The stop-watch is used in systematizing and standardizing work, to determine definitely how much time is required for the several portions of a task when the work is performed in the approved manner. It is a feature of the instruction by which unnecessary motions are eliminated, and a clumsy workman is trained to be an efficient one. The present Secretary of War, in a letter to the Speaker of the House, stated that the wages paid, "as a flat rate, irrespective of their response to the time system, is the current rate of the community for similar work and, in addition to that, premiums are offered, not large, but large enough to stimulate continuous and faithful activity." It was in evidence that the output of the Watertown arsenal had been increased from 50 to 100 per cent. by the system. Secretary Baker went on to say in the same letter:

"The legislation which is being urged upon Congress, is advocated by organized labor which is opposed to the system intended to be prohibited, for the essential reason

which is embodied in the charge that it is a speeding-up system. I can not understand this charge as having any other meaning than that the work required of the employees by the system is unduly severe. Of the truth of this charge in the practice of the system at the Watertown Arsenal, there is no evidence whatever, but there is a great deal of evidence the other way. There is no complaint of overwork at the arsenal, and no workman has been discharged because of failure to meet the requirements of the system."

"To prohibit the system of which the record shows undoubted advantages both to the Government and to the employees, because of a charge unsupported by evidence, or even by any attempted evidence, for there has been no effort to prove overwork at the Watertown Arsenal, seems to me to be most unwise."

Workmen in the arsenals have an eight-hour day, with 15 full days of vacation in the year, seven national holidays and 13 half-holidays in the summer season, in all ten per cent. of the working time off with full pay.

The report of the minority of the House Committee, condemning the Tavenner proposal refers to the ill effect which such action by the government at this time would have upon industrial progress in this country, and says:

"It is self-evident that if a system is so nefarious as to justify the Government in imposing the penalty of imprisonment upon a Brigadier-General or Cabinet officer, such a system would be so obnoxious that any private manufacturing establishment would be obliged to discard it. If it is made a crime for a public officer to make a time study for the purpose of fixing a standard of service or pay a premium, it is equally reprehensible for a private person to do the same thing."

The case illustrates the fundamental weakness of the government in industrial undertakings.

The management of the shops is taken out of the hands of the officials who have them in charge, and who feel some personal responsibility in their successful operation, by a vote of Congress, without any evidence to warrant the action. Of course efficiency is not to be expected under such conditions.

The especial applicability of the Taylor system to Government operations has been pointed out by Mr. Ray Stannard Baker, in a recent appreciation of the work of F. W. Taylor, author of the system. Mr. Baker says:

Mr. Taylor's system, or something closely resembling it, must increasingly become the basic method of controlling industry. The moment competition disappears in any branch of human activity the need of new scientific basis for measuring values becomes imminent. The especial difficulty in all Government work to-day is the absence of standards. No one knows how much work a man should do, or how he should do it most efficiently, or what should be the fair relationship between a given task and the compensation paid for it. It is not without significance that few managers have seized upon the Taylor system with such alacrity and satisfaction as the able engineers in control of Government arsenals and navy yards.

That the labor organizations should be opposed to efficiency systems is something to be regretted, but they have been too persistently wrong in their attitude toward efforts to increase the productivity of industry for their opposition in any instance to be accepted as conclusive. It is an habitual attitude, for which explanation and even justification may be found in the history of industry, but as an habitual attitude it is wrong. The increase of productivity is more important to the poor man than to the rich man; the latter's needs are already amply sup-

STATEMENT OF RESOURCES AND LIABILITIES OF EACH OF THE TWELVE FEDERAL RESERVE BANKS AT THE CLOSE OF BUSINESS JUNE 23, 1916. (In Thousands of Dollars)

RESOURCES	Boston	N. Y.	Phila.	Clev'd	Rich'd	Atlanta	Chicago	St. Louis	M'np'l's	Kas.City	Dallas	S.Fr'sco	Total
Gold coin and certifs. Settlement fund. Cr. Balances	6,055	156,378	9,087	12,785	5,049	6,220	42,939	4,974	6,455	4,225	5,735	5,741	265,643
Gold Settlement Fund.....	14,430	4,055	13,287	11,302	14,663	5,392	4,582	6,394	5,628	8,181	9,055	9,152	106,101
Gold Redemption Fund.....	5	250	50	32	410	483	200	88	30	79	257	10	1,894
Total gold reserves.....	20,490	160,683	22,424	24,119	20,122	12,095	47,701	11,456	12,113	12,485	15,047	14,903	373,638
Legal tender notes, Silver certifs. and Sub. coin.....	17	7,782	181	1,126	204	542	1,777	1,050	685	145	518	9	14,026
Total Reserves.....	20,507	168,465	22,605	25,245	20,326	12,637	49,478	12,506	12,808	12,630	15,565	14,912	387,664
Redemption fund—F. R. bank notes										400	50		450
Bills discounted, Members Commercial paper	279	433	615	270	5,257	2,774	1,921	571	876	1,944	5,384	426	20,750
Bill bought in open market	12,174	23,341	10,294	4,501	800	1,559	3,892	3,657	1,799	1,117		5,519	68,953
Total bills on hand.....	12,453	23,774	10,909	4,771	6,057	4,333	5,813	4,228	2,675	3,061	5,384	6,245	89,703(c)
Investment U. S. Bonds.....	3,082	3,463	3,533	6,706	1,605	1,684	9,753	2,959	3,512	9,853	3,111	3,809	52,875
One-year U.S. Treas. notes	250	1,532	462		456	350		380	350	410			4,190
Municipal Warrants.....	2,820	4,726	1,831	4,587	60		3,401	941	1,239	430		1,747	21,632
Total Earning Assets	18,405	33,495	16,780	16,064	8,178	6,367	18,967	8,508	7,776	13,754	8,495	11,601	168,400
Federal Reserve Notes, net	965	13,718	402	327		1,728	1,700	1,220	844			2,109	23,013
Due from other F.R. Banks	4,759		4,514	1,194	934	529	6,585	1,494	848	1,870	212	1,789	19,287(b)
All other resources.....	92	293	35	344	173	1,141	432	336	108	391	904	138	4,387
TOTAL RESOURCES.....	44,728	215,951	44,346	43,174	29,611	22,393	77,162	24,064	22,384	29,045	25,226	30,549	603,201
LIABILITIES													
Capital Paid in.....	4,925	11,281	5,216	5,966	3,357	2,463	6,673	2,790	2,577	3,001	2,676	3,933	54,863
Government Deposits.....	3,367	15,681	5,680	1,251	7,580	8,646	6,291	3,562	734	1,560	6,185	3,462	64,499
Reserve Deposits, net.....	36,857	183,567	33,438	35,957	14,593	11,161	64,198	17,712	19,073	21,999	11,914	23,154	472,613
Federal Reserve Notes-net					4,015					782	4,451		9,228(a)
Federal Reserve Bank Notes in circulation.....										1,723			1,723
Due to other F. R. Banks		5,432											
net.....	79		12		66	118							275
All other liabilities.....													
TOTAL LIABILITIES.....	44,728	215,951	44,346	43,174	29,611	22,393	77,162	24,064	22,384	29,045	25,226	30,549	603,201

(a) Total Reserve notes in circulation, 153,038.

(b) After deduction of items in transit between Federal Reserve Banks, 19,287, the Gold Reserve against Net deposit and note Liabilities is 79.9%, and the cash reserve is 73.6%. Cash Reserve against net deposit and note liabilities after setting aside 40% Gold Reserve against net liabilities on Federal Reserve Notes in circulation, 74.2%.

(c) Maturities of bills discounted and loans: within 10 days, 14,451; to 30 days, 12,918; to 60 days, 31,680; other maturities, 30,654; Total, 89,703.

plied, and additional abundance which raises the level of the common supply is more significant to the former. When the waters of a lake subside it is the shallow places, not the deeps, that are first uncovered.

The Bond and Stock Market for June.

The most important bond offering in June was the Imperial Russian Government 6½% Loan. The terms of this loan present several new features in Government financing, which should be carefully noted by our investors. A credit of \$50,000,000 has been established in this country by American bankers for the Russian Government, and at the same time a credit in Russia for 150,000,000 rubles has been granted to our bankers, at the fixed ratio of three rubles per dollar. Principal and interest on the credit arranged here is payable in New York, in U. S. gold dollars. The credit will run for three years unless otherwise retired, as provided in the loan. The American bankers have an option during the three years to use the credit in Russia to purchase Imperial Russian Government 5-year 5½% bonds at 94¾%, less a 4½% commission, on the basis of three rubles for the dollar. Applications for participation were in excess of the amount of the credit and the loan quickly advanced to a premium. It is now selling around 100½%, yielding over 6.25%. In addition to this yield as a straight investment, the loan is safeguarded by payment in this country in U. S. gold, and offers an opportunity to profit by any future rise in exchange. The ruble is normally worth 51.456c., but on account of the decrease in Russian exports and heavy purchases abroad for the war, has recently declined to about 30.75c. This new loan, because payable in New York in dollars, is not only protected from loss in a further decline in the value of the ruble, but provides the privilege to exercise the option on the 5-year Imperial Government bonds, or use the credit in Russia for ordinary exchange operations if the value of the ruble goes up. The profit which may come from a rise in exchange is to be divided equally with the Russian Government. Should the credit in Russia be used, the credit in New York will be reduced correspondingly. This transaction has awakened new interest on the part of American investors in Russian resources, and the possibilities of profitable participation in the future development of that country.

Pending the investigation by the City of Chicago in regard to the unification of all the elevated and surface lines in the City, the Chicago Elevated Railways has announced an extension of its two-year notes for three years, at 6%, including the deposit of additional security.

Several bond issues of Canadian provinces and municipalities have been brought out in this market during June. Among these issues are \$4,000,000 Province of Ontario 10-year 5s on a 4.85% basis; \$4,000,000 Province of Quebec 10-year 5s on a 4.90% basis, and \$5,000,000 Government of Newfoundland 3-year 5s on a 5.20% basis. Following the practical closing of the English money market to Canadian financing, good bond issues of the Do-

minion are finding a ready market in the United States. Such issues should appeal to our investors as being close at hand and similar in many ways to our own forms of investment.

Five Million Dollar Baltimore and Ohio R. R. 4½% Equipment Trust Certificates were sold on a 4.30% basis. A plan of reorganization has been announced for the Pere Marquette Railroad, and the voluntary plan of reorganization for the Minneapolis and St. Louis R. R. has been declared operative.

Bond prices have declined fractionally, and the volume of sales on the New York Stock Exchange has decreased. The average price of 40 listed bonds, as compiled by the *Wall Street Journal*, was 94.06 on June 24th, compared with 94.49 June 1st. Daily sales on the Exchange to the close of business on the 24th averaged \$3,423,700, compared with \$3,791,000 in May, \$3,707,000 in April and \$2,229,000 in June, 1915.

Stock prices have also declined during the month. The average price of 20 railroads, as compiled by the *Wall Street Journal*, was 105.45 on the 24th, compared with 107.06 on the 1st, and of 12 industrials 121.20 on the 24th, compared with 122.96 on the 1st. The prices do not represent wider fluctuations that have taken place in individual issues. Daily sales up to the 24th have averaged 489,090 shares, compared with 677,990 shares in May, 521,000 shares in April, and 423,300 shares in June, 1915. Railroad stocks still hold a favorable position, due to continued good returns, but the failure of the companies to reach an agreement with the employes in regard to wage advances has instilled an element of caution among traders in this class of securities. The commercial position of the United States has become so well grounded in increasing cash resources and production of commodities required at present by other nations, that influences not of a fundamental character cannot have a permanent effect on security prices.

Discount Rates.

Discount rates of each Federal Reserve Bank in effect June 28, 1916.

	MATURITIES				Agricultural and commercial paper over 90 days.	Trade acceptances.		Commodity paper.
	10 days and less.	over 10 days to 30 days, inclusive.	over 30 days to 60 days, inclusive.	over 60 days to 90 days, inclusive.		To 60 days, inclusive.	Over 60 to 90 days inclusive.	
Boston.....	3	3½	4	4	5	3	3	A3½
New York....	3	4	4	4	5	3½	3½	...
Philadelphia.	3	4	4	4	4½	3	3	A3
Cleveland....	3½	4	4	4½	5	3	3½	...
Richmond....	4	4	4	4	5	3½	3½	A3½
Atlanta.....	4	4	4	4	5	3½	3½	B3½
Atlanta New Orleans br.	C3½-4	C3½-4	...
Chicago.....	3½	4	4½	4	5	D3	D3½	...
St. Louis....	3	4	4	4	5	3	3	...
Minneapolis.	4	4	4	4½	5	3½	3½	3
Kansas City..	4	4½	4½	4½	5	3½	3½	3
Dallas.....	4	4	4	4	4½	3½	3½	B3
San Francisco	3	3½	4	4½	5½	3	3½	E

A Rate for commodity paper maturing within 90 days.

B Rate for bills of exchange in open market operations; Atlanta 3½-5½; paper bought, Dallas 3-5.

C Rate for trade acceptances bought in open market, without member bank indorsement.

D A rate of 2 to 4 per cent for bills with or without member bank indorsement was authorized on Dec. 21, 1915.

E Rate for commodity paper maturing within 30 days, 3½ per cent; over 30 to 60 days, 4 per cent; over 60 to 90 days, 4½ per cent; over 90 days, 5 per cent.

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